

SUPPORTING INFORMATION

Figure S1. BSD-SEM fracture cross-section view of a NFO-CTO membrane after sintering at 1400 °C for 10 h.

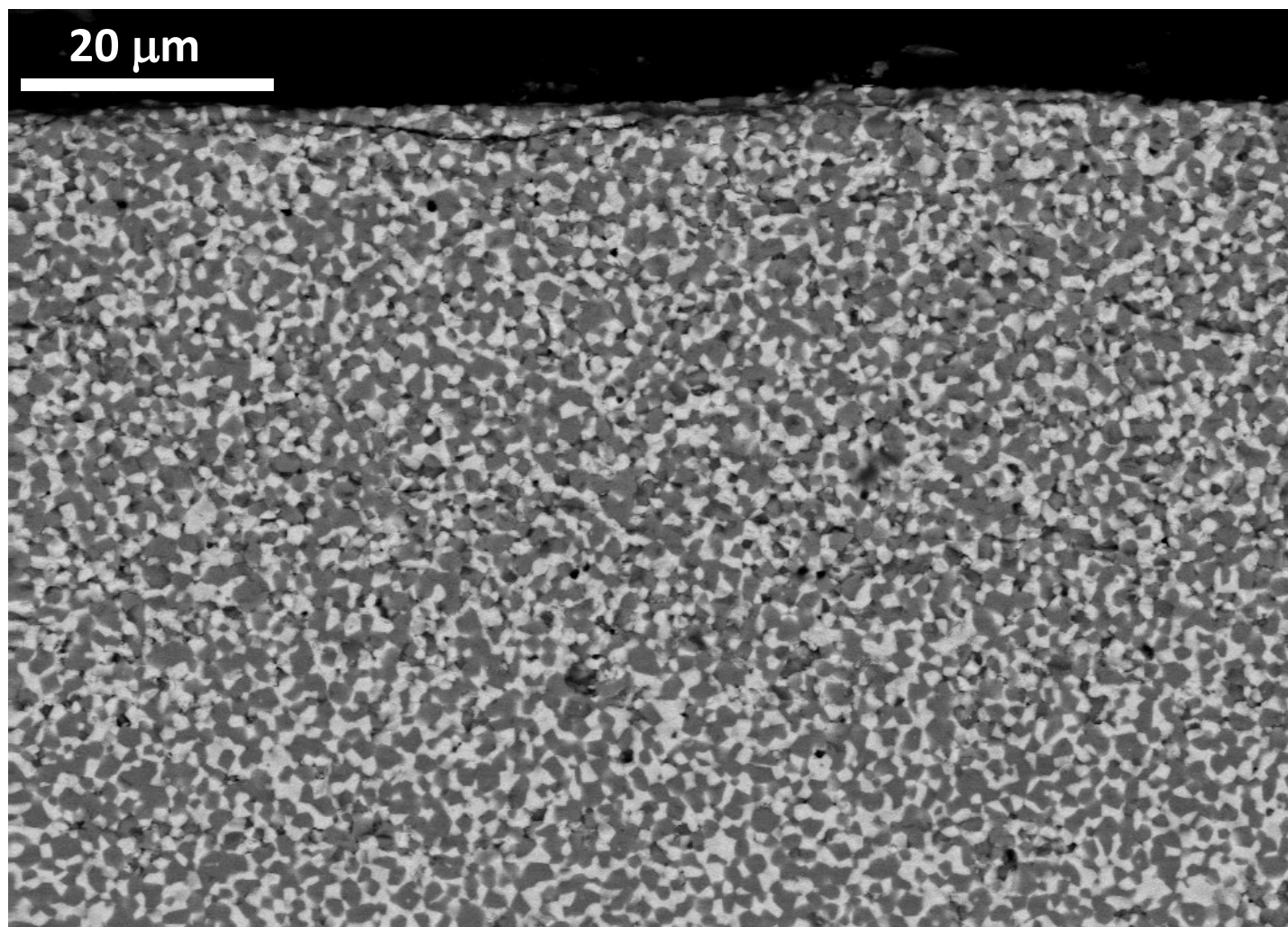


Figure S2.BSD-SEM pictures of a) NFO-CTO backbone and b) NFO-CTO backbone activated with Pr_6O_{11} nanoparticles.

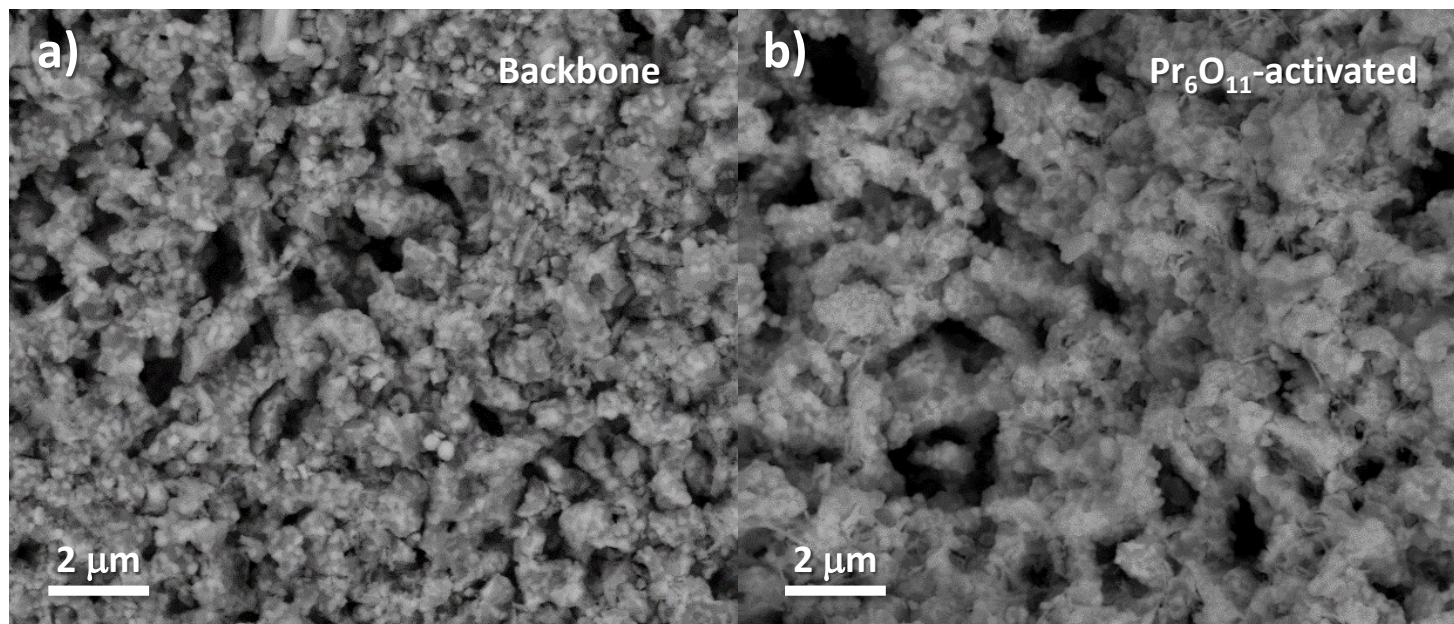


Figure S3. Overall exchange rate measured by PIE for composite powders with different vol. ratios of the components.

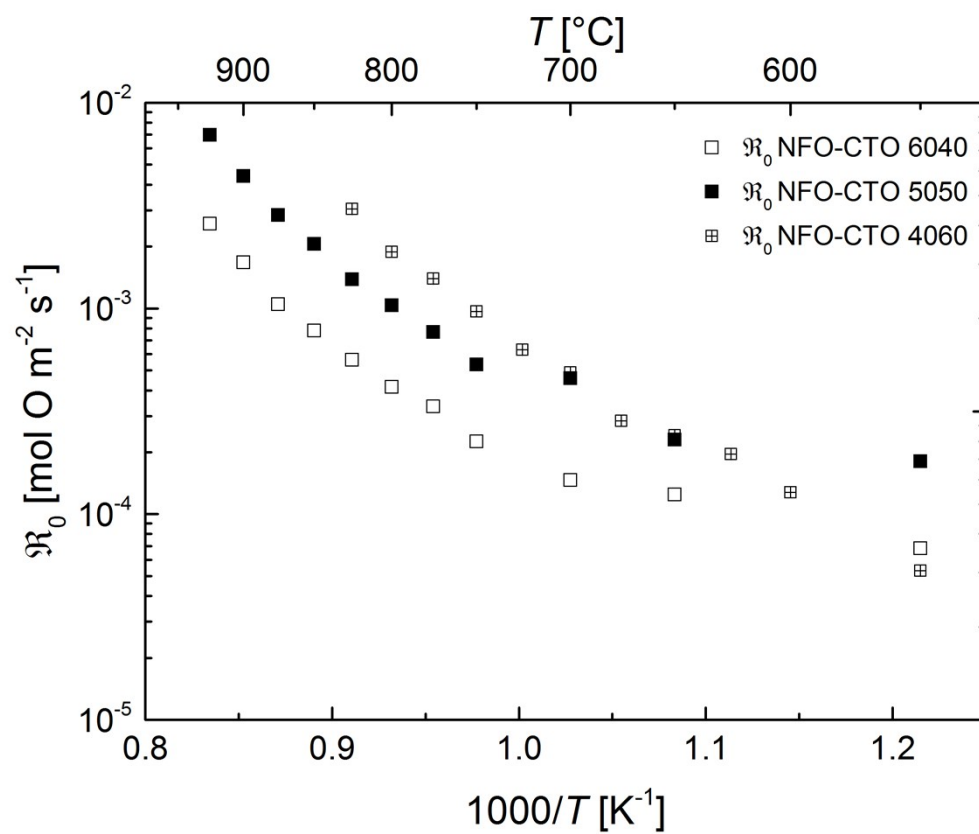


Figure S4. Capacitance (a) and frequency (b) obtained from the fitting of the electrochemical impedance spectrums in different atmospheres at 850 °C.

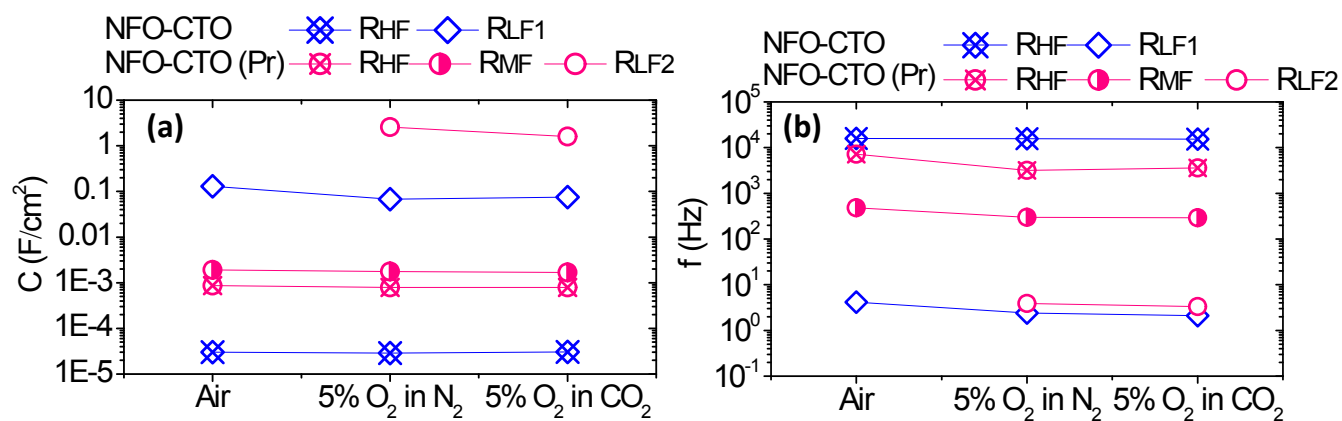


Figure S5. Oxygen partial pressure dependence of the Pr_6O_{11} -activated and non-treated NFO-CTO fitting results at 850 °C.

